

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. **(Currently Amended)** A method comprising:

receiving at least one policy definition defined by a user, wherein the at least one policy definition includes at least one conditional relationship specification, and wherein the at least one policy definition programmatically specifies relationships between resources in an autonomic computing system and defines at least one desired end state therefor;

determining, by the autonomic computing system, that a state of at least one resource substantially satisfies a predetermined requirement of the at least one conditional relationship specification;

determining, by the autonomic computing system in response to the state of the at least one resource substantially satisfying the predetermined requirement, that [[a]] the desired end state ~~for an autonomic computing system~~ can be reached by applying using the at least one policy definition conditioned by the at least one conditional relationship specifications; and

placing the autonomic computing system in the desired end state by applying the at least one policy definition.

2. **(Currently Amended)** A method comprising:

receiving at least one policy definition defined by a user, wherein the at least one policy definition includes at least one conditional relationship specification, and wherein the at least one policy definition programmatically specifies relationships between resources in an autonomic computing system and defines at least one acceptable sub-state and at least one desired end state for the autonomic computing system;

determining that [[a]] the desired end state for [[an]] the autonomic computing system cannot be reached;

determining that [[an]] the acceptable sub-state can be reached using at least one of priority ratings, conditional relationship specifications, and alternative relationship specifications; and

placing the autonomic computing system in [[an]] the acceptable sub-state as a substitution for the desired end-state.

3. (Original) The method of claim 2, wherein the priority ratings comprise an attribute assigned to a policy definition that determines at least one of a selection of conflicting policy definitions and a sequence for applying the policy definitions.

4. (Original) The method of claim 3, wherein the attribute assigned to the policy definition is one of the following: mandatory, a numerical value, and not required.

5. (Original) The method of claim 2, wherein the conditional relationship specifications comprise policy definitions that are applied when the state of a specified resource meets a predetermined requirement.

6. (Original) The method of claim 2, wherein the alternative relationship specifications comprise at least one of policy definitions, and conditional relationship specifications, that are applied when the state of a specified resource does not meet a predetermined requirement.

7. (Currently Amended) A computer readable storage medium comprising computer instructions for performing the following:

receiving at least one policy definition defined by a user, wherein the at least one policy definition includes at least one conditional relationship specification, and wherein the at least one policy definition programmatically specifies relationships between resources in an autonomic computing system and defines at least one desired end state therefor;

determining, by the autonomic computing system, that a state of at least one resource substantially satisfies a predetermined requirement of the at least one conditional relationship specification;

determining, by the autonomic computing system in response to the state of the at least one resource substantially satisfying the predetermined requirement, that [[a]] the desired end state ~~for an autonomic computing system~~ can be reached by applying using the at least one policy definition conditioned by the at least one conditional relationship specifications; and

placing the autonomic computing system in the desired end state by applying the at least one policy definition.

8. **(Currently Amended)** A computer readable storage medium comprising computer instructions for performing the following:

receiving at least one policy definition defined by a user, wherein the at least one policy definition includes at least one conditional relationship specification, and wherein the at least one policy definition programmatically specifies relationships between resources in an autonomic computing system and defines at least one acceptable sub-state and at least one desired end state for the autonomic computing system;

determining that [[a]] the desired end state for [[an]] the autonomic computing system cannot be reached;

determining that [[an]] the acceptable sub-state can be reached using at least one of priority ratings, conditional relationship specifications, and alternative relationship specifications; and

placing the autonomic computing system in [[an]] the acceptable sub-state as a substitution for the desired end-state.

9. (Original) The computer readable medium of claim 8, wherein the priority ratings comprise an attribute assigned to a policy definition that determines a sequence for applying the policy definition.

10. (Original) The computer readable medium of claim 9, wherein the attribute assigned to the policy definition is one of the following: mandatory, a numerical value, and not required.

11. (Original) The computer readable medium of claim 8, wherein the conditional relationship specifications comprise policy definitions that are applied when the state of a specified resource meets a predetermined requirement.

12. (Original) The computer readable medium of claim 8, wherein the alternative relationship specifications comprise at least one of policy definitions and conditional relationship specifications that are applied when the state of a specified resource does not meet a predetermined requirement.

13. (Currently Amended) An autonomic resource manager for an autonomic computing system, the autonomic resource manager comprising:

memory for storing at least one policy definition defined by a user, wherein the at least one policy definition includes at least one conditional relationship specification, and wherein the at least one policy definition programmatically specifies relationships between resources in an autonomic computing system and defines at least one desired end state therefor;

a resource monitor, communicatively coupled with each resource in the autonomic computing system, for monitoring, and communicating data with, each resource in the autonomic computing system;

an equivalency definer, communicatively coupled with each resource in the autonomic computing system, and with the memory, for defining at least one equivalency representing at least one set of equivalent resources in the autonomic computing system, and storing the at least one equivalency in the memory, wherein the equivalency defines the at least one set of equivalent resources that can be substituted for one another in accordance with the at least one policy definition that includes at least one conditional relationship specification to arrive at the desired end state;

a policy generator, communicatively coupled with the resource monitor and the memory, for providing in the memory a representation of a system-wide graph of available actions and at least one of: ~~priority ratings~~, conditional relationship specifications[[,]] and alternative relationship specifications, corresponding with resources in the autonomic computing system; and

an automation engine, communicatively coupled with the resource monitor, with at least one resource in the autonomic computing system, and with the memory, for providing available actions as defined by the at least one policy definition to the at least

one resource in the ~~in the~~ autonomic computing system in order for the autonomic computing system to establish and maintain a desired end state.

14. (Original) The autonomic resource manager of claim 13, further comprising:
a resource harvester, communicatively coupled with each resource in an autonomic computing system, with the resource monitor, with the equivalency definer, with the policy generator, and with the memory, for specifying underlying relationships between resources in the autonomic computing system via self discovery;

15. (Original) The autonomic resource manager of claim 13, wherein the priority ratings comprise an attribute assigned to a policy definition that determines a sequence for applying the policy definition.

16. (Original) The autonomic resource manager of claim 13, wherein the conditional relationship specifications comprise policy definitions that are applied if the state of a specified resource meets a predetermined requirement.

17. (Original) The autonomic resource manager of claim 13, the alternative relationship specifications comprise at least one of policy definitions and conditional relationship specifications that are applied when the complete desired end state of the system cannot be met.

18. **(Currently Amended)** An autonomic computing system, comprising:
distributed resources; and
an autonomic resource manager, communicatively coupled with the distributed resources, for receiving at least one policy definition defined by a user, wherein the at least one policy definition includes at least one conditional relationship specification, and wherein the at least one policy definition programmatically specifies relationships between resources in an autonomic computing system and defines at least one acceptable sub-state and at least one desired end state for the autonomic computing system, determining that [[a]] the desired end state for the autonomic computing system cannot be reached, determining that [[an]] acceptable sub-state can be reached using at least one of priority ratings, conditional relationship specifications, and alternative relationship specifications, and placing the autonomic computing system in [[an]] acceptable sub-state as a substitution for the desired end-state.

19. (Original) The autonomic computing system of claim 18, wherein the priority ratings comprise an attribute assigned to a policy definition that determines a sequence for applying the policy definition to the operation of the distributed resources.

20. (Original) The autonomic computing system of claim 18, wherein the conditional relationship specifications comprise policy definitions that are applied if the state of a specified resource meets a predetermined requirement.

21. (Original) The autonomic computing system of claim 18, wherein the alternative relationship specifications comprise at least one of policy definitions and conditional relationship specifications that are applied when the complete desired end state of the system cannot be met.